

**MENU****SEARCH****INDEX****DETAIL****JAPANESE****LEGAL  
STATUS**

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**PATENT ABSTRACTS OF JAPAN**

(11)Publication number : 11-084999

(43)Date of publication of application : 30.03.1999

(51)Int.Cl.

G09B 7/00

G06F 17/30

(21)Application number : 09-238258

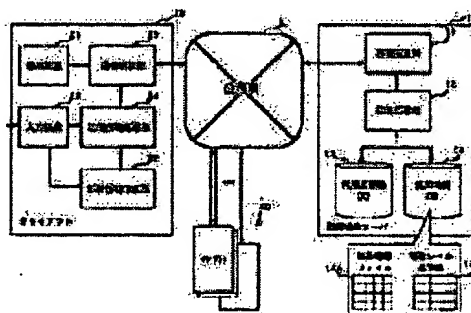
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(22)Date of filing : 03.09.1997

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ENDO HIDENORI**(54) INFORMATION PRESENTATION SYSTEM AND ITS CONSTITUTION APPARATUS AND RECORDING MEDIUM****(57)Abstract:**

**PROBLEM TO BE SOLVED:** To provide an information presentation system capable of selecting and presenting optimum electronic information according to the information recognition level at an information acquirer.

**SOLUTION:** This system comprises an information presentation server 10 which presents the electronic information and one or plural clients 20 which acquires the electronic information and presents the same to users. The information presentation server 10 selects the desired electronic information from presentation information DB 14 in accordance with the information acquisition requests from the clients 20 and the information in user management DB 13 and transmits the information to the clients 20. The server evaluates the response information from the clients 20 in an automatic response section 12 and updates the information recognition level of the users in the user management DB 13 in accordance with this evaluated result. The server selects the succeeding electronic information in accordance with this information recognition level from the provision information DB 14 and transmits the information to the clients 20.



**CLAIMS**

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[Claim(s)]

[Claim 1] A system possessing an information acquisition system characterized by comprising the following which a user operates, and an information presenting device connected to said information acquisition system so that two-way communication was possible.

An information retaining means holding two or more electronized information which said information presenting device should reply to a predetermined information acquisition request.

An information presenting means which acquires a response indication sent from an information acquisition system of a reply place while reading and replying electronized information corresponding to an information acquisition request sent through said information acquisition system from said user from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information.

An information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[Claim 2] A system which connects an information acquisition system characterized by comprising the following which a student operates, and an information presenting device which a teacher operates so that two-way communication is possible.

An information retaining means holding two or more electronic teaching materials which said information presenting device should reply to a predetermined information acquisition request.

An information presenting means which acquires a response indication over said electronic teaching materials while reading and replying electronic teaching materials corresponding to an information acquisition request of a predetermined learning level sent through said information acquisition system from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of completion of the student concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information.

An information switching means which changes dynamically electronic teaching materials of succession shown to said student according to said determined information level.

[Claim 3] The information presenting system according to claim 1 or 2; wherein a response indication which said information acquisition system replies corresponding to electronized information which said information presenting device transmits, and the electronized information concerned is respectively finite wording of a telegram.

[Claim 4] While reading and showing an information retaining means holding two or more electronized information used as a candidate for presentation, and electronized information corresponding to a predetermined information acquisition request from said information retaining means, An information presenting means which acquires a response indication replied from a presentation place, and evaluation methods which evaluate an acquired response indication and determine an evaluation value of the presentation place concerned, An information presenting device having an information switching means which changes dynamically electronized information of succession shown to the same presentation place based on said determined evaluation value.

[Claim 5] It is a device connected to an information acquisition system provided with a means to reply a response indication from a user to shown electronized information so that two-way communication is possible, While reading and replying electronized information corresponding to an information acquisition request of an information retaining means holding two or more electronized information which should be replied to a predetermined information acquisition request, and a user

seen off through said information acquisition system from said information retaining means, An information presenting means which acquires a response indication sent by user of a reply place, and evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, An information presenting device having an information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[Claim 6]The information presenting device according to claim 4 or 5, wherein said information switching means transmits said changed electronized information to said user, without waiting for a following information acquisition request.

[Claim 7]The information presenting device according to claim 4 or 5 when the expected value range of an evaluation result of a response indication is beforehand set up for every information level and said evaluation methods deviates [ said acquired response indication ] from said expected value range, wherein it determines the present information level and a different information level.

[Claim 8]The information presenting device according to claim 7, wherein said evaluation methods hold said determined information level in nonvolatile memory for said every user, enabling free updating.

[Claim 9]A device connected to an information presenting device given [ of the Claims 4-8 / one ] in a paragraph so that two-way communication is possible, comprising:

A means to transmit an information acquisition request including a user's authority information to said information presenting device.

A presenting means which acquires electronized information corresponding to said information acquisition request from said information presenting device, and is shown to said user, and a means to create a response indication which can recognize said information presenting device based on a reply from said user, and to reply to said information presenting device.

[Claim 10]To an information acquisition system provided with a means to reply a response indication from a user to shown electronized information, it is connected so that two-way communication is possible, It is the recording medium which recorded a program which a computer possessing an information retaining means holding two or more electronized information which should be replied to a predetermined information acquisition request can read, While reading and replying at least electronized information corresponding to a user's information acquisition request sent through said information acquisition system from said information retaining means, said program, Processing which acquires a response indication sent by user of a reply place, and processing which determines an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication, A recording medium being a thing which makes said computer perform processing which changes dynamically electronized information of succession shown to said user according to said determined information level.

[Claim 11]It is the recording medium which recorded a program which a computer connected to an information presenting device given [ of the Claims 5-8 / one ] in a paragraph so that two-way communication is possible can read, Processing by which said program transmits at least an information acquisition request including a user's authority information to said information presenting device, A recording medium being a thing which makes said computer perform processing which acquires electronized information corresponding to said information acquisition request, and is shown to said user, and processing which creates a response indication which can recognize said information presenting device based on a reply from said user, and is replied to the information presenting device concerned.

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[Translation done.]

**TECHNICAL FIELD**

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[Field of the Invention] This invention belongs to technical fields, such as CAI (Computer Assisted Instruction) and a network. For example, when exchanging information between [ which was connected to the network ] two or more computers, it is related with the technique of selecting automatically the information which should be transmitted to the computer of another side by one computer side, and transmitting.

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[Translation done.]

## PRIOR ART

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[Description of the Prior Art] Generally in a school, a cram school, a vocational school, and other educational facilities, study is performed by the following stages thru/or procedures through information exchange between personal [ between a teacher and a student / human ].

(a) Teaching materials, a problem

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[Translation done.]

## EFFECT OF THE INVENTION

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[Effect of the Invention] Since according to this invention the implications of the response indication corresponding to the shown electronized information are analyzed by the information presentation side and the information grasp level in an information acquisition place is automatically recognized so that clearly from the above explanation, It is effective in selection of the optimal electronized information over the same information acquisition place becoming very easy. service of information presentation can be automated by standardizing and managing the electronized information and the response indication used as the candidate for presentation, and it is effective in the practicality and reliability of a system being markedly alike, and increasing.

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[Translation done.]

## TECHNICAL PROBLEM

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Distribution of (TECHNICAL PROBLEM): Collections of problems, such as a paper medium, a text (b) problem

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[Translation done.]

## MEANS

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[Means for Solving the Problem]An information presenting system of this invention which solves an aforementioned problem possesses and constitutes an information acquisition system which a user operates, and an information presenting device connected to said information acquisition system so that two-way communication was possible. An information retaining means holding two or more electronized information which should reply an information presenting device to a predetermined information acquisition request, While reading and replying electronized information corresponding to an information acquisition request sent through said information acquisition system from said user from said information retaining means, An information presenting means which acquires a response indication sent from an information acquisition system of a reply place, Evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, It has an information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0007]Other information presenting systems of this invention are provided with the following. An information retaining means holding two or more electronic teaching materials which are the systems which connect an information acquisition system which a student operates, and an information presenting device which a teacher operates so that two-way communication is possible, and said information presenting device should reply to a predetermined information acquisition request.

An information presenting means which acquires a response indication over said electronic teaching materials while reading and replying electronic teaching materials corresponding to an information acquisition request of a predetermined learning level sent through said information acquisition system from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of completion of the student concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, and an information switching means which changes dynamically electronic teaching materials of succession shown to said student according to said determined information level.

[0008]As for a response indication which said information acquisition system replies corresponding to electronized information which said information presenting device transmits, and the electronized information concerned, in each above-mentioned information presenting system, it is desirable that it is respectively finite wording of a telegram. If it does in this way, the above-mentioned evaluation can be performed finitely and automatic recognition of an information level will become possible.

[0009]An information presenting device of this invention which solves SUBJECT besides the above is provided with the following.

An information retaining means holding two or more electronized information used as a candidate for presentation.

An information presenting means which acquires a response indication replied from a presentation place while reading and showing electronized information corresponding to a predetermined information acquisition request from said information retaining means.

Evaluation methods which evaluate an acquired response indication and determine an evaluation value of the presentation place concerned, and an information switching means which changes dynamically electronized information of succession shown to the same presentation place based on said determined evaluation value.

[0010]Other information presenting devices of this invention are provided with the following.



An information retaining means which is a device connected to an information acquisition system provided with a means to reply a response indication from a user to shown electronized information so that two-way communication is possible, and holds two or more electronized information which should be replied to a predetermined information acquisition request.

An information presenting means which acquires a response indication sent by user of a reply place while reading and replying electronized information corresponding to a user's information acquisition request sent through said information acquisition system from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, and an information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0011]In each information presenting device, said information switching means is constituted so that said changed electronized information may be transmitted to said user for example, without waiting for a following information acquisition request. Said evaluation methods set up the expected value range of an evaluation result of a response indication for every information level beforehand, and they constitute it so that the present information level and a different information level may be determined, when said acquired response indication deviates from said expected value range. When holding a user's information level continuously, said evaluation methods are constituted so that said determined information level may be held in nonvolatile memory for said every user, enabling free updating.

[0012]An information acquisition system of this invention which solves SUBJECT besides the above is provided with the following.

A means to be a device connected to an information presenting device of above-mentioned this invention so that two-way communication is possible, and to transmit an information acquisition request including a user's authority information to said information presenting device.

A presenting means which acquires electronized information corresponding to said information acquisition request from said information presenting device, and is shown to said user.

A means to create a response indication which can recognize said information presenting device based on a reply from said user, and to reply to said information presenting device.

[0013]In order to solve SUBJECT besides the above, this invention provides the 1st recording medium for operating a computer as an information presenting device, and the 2nd recording medium for operating a computer as an information acquisition system.

[0014]To an information acquisition system provided with a means to reply a response indication from a user to shown electronized information, the 1st recording medium is connected so that two-way communication is possible, It is the recording medium which recorded a program which a computer possessing an information retaining means holding two or more electronized information which should be replied to a predetermined information acquisition request can read, and said program makes said computer perform the following processing at least.

(1-1) While reading and replying electronized information corresponding to a user's information acquisition request sent through said information acquisition system from said information retaining means, Processing which determines an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating processing which acquires a response indication sent by user of a reply place, and said (1-2) acquired response indication, (1-3) Processing which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0015]The 2nd recording medium is a recording medium which recorded a program which a computer connected to an information presenting device of above-mentioned this invention so that two-way

communication is possible can read, and said program makes said computer perform the following processing at least.

(2-1) Processing which transmits an information acquisition request including a user's authority information to said information presenting device, (2-2) Processing which acquires electronized information corresponding to said information acquisition request, and is shown to said user, processing which creates a response indication which can recognize said information presenting device based on a reply from said (2-3) user, and is replied to the information presenting device concerned.

[0016]

[Embodiment of the Invention] Hereafter, with reference to Drawings, an embodiment of the invention is described in detail.

(A 1st embodiment) Drawing 1 is a functional block diagram showing one embodiment of the information presenting system of this invention. This information presenting system 1 possesses two or more clients 20 used as two or more computers 10 connected via the public network L so that two-way communication was possible, for example, the information presentation server used as an example of an information presenting device, and an example of an information acquisition system, and is constituted.

[0017] The information presentation server 10 builds user management DB(database)13 and provided information DB14 to the internal storage or external storage of a server main part. It has a function of the information transfer part 11 and the automatic answering part 12 which are formed when the above-mentioned server main part reads and executes a predetermined program, and is constituted. The data input unit 22 in which each client 20, on the other hand, receives the data input from the presentation system 21 and user who present electronized information to a user, respectively. The function of the communication control part 23 and the transmit information treating part 24 which are formed when the main part of a client terminal reads and executes a predetermined program, and the response indication preparing part 25 is provided, and it is constituted.

[0018] The above-mentioned program which forms the functional blocks 11-14 in the information presentation server 10, and the functional blocks 23-25 in the client 20 at least. Usually, although it is stored in the internal storage or external storage of the computer (a server main part, the main part of a client terminal) concerned, and it is read at any time and performs. It may be stored in a recording medium with the disengageable computer concerned, for example, CD-ROM, FD, etc., it may be installed in the above-mentioned internal storage or an external storage at the time of use, and execution may be presented at any time. from the program server stored, for example in the local area network, reading appearance may be carried out at any time, and it may perform.

[0019] In the offer-of-information server 10, the user ID, user name, and information level which are a user's characteristic data are stored in user management DB13 so that it may be shown in the completion item for every [ in the client 20 ] user, for example, drawing 2. An information level expresses a user's information grasp level for every user, for example, the completion level according to the process of the below-mentioned English study.

[0020] The provided information file 14A and the information level reference table 14B are stored in provided information DB14. The provided information file 14A is the electronized information (example: English word) matched for every information level, and the information level reference table 14B list-izes standard information of the information level according to the evaluation result of the response indication from the client 20. Drawing 3 shows the example of contents of the provided information file 14A, and drawing 4 shows an example of the contents of the information level reference table 14B. After user management DB13 and provided information DB14 comprise nonvolatile memory and a system becomes \*\*, also when it re-rises, the contents disappear.

[0021] While the information transfer part 11 receives the information access, i.e., the information acquisition request, or its response indication from the client 20 and making it answer the automatic answering part 12, The electronized information addressed to a user (this embodiment question)

sent from the automatic answering part 12 is turned to the client 20, and it transmits. The electronic intelligence addressed to a user is the electronized information acquired out of the provided information DB14 based on the information level for each user of every read in user management DB13, etc. The automatic answering part 12 updates the characteristic data of the user under user management DB13 based on the response indication from the client 20.

[0022]In the client 20, the communication control part 23, The communication procedure between the information presentation servers 10 is controlled, the response indication from the information acquisition request as which the transmit information treating part 24 was inputted [ publicly known ] by the user via the input device 22, or the response indication preparing part 25 is received, and it outputs to the communication control part 23. When a user ID is contained and it performs an information acquisition request newly, initialization information, i.e., a user name, and the information level which the user set up are further included in an information acquisition request. A response indication is the reply information over the electronized information which acquired from the information presentation server 10, for example according to the above-mentioned information acquisition request, and was shown through the presentation system 21.

[0023]Next, the example in the case of performing English study using the above-mentioned information presenting system 1 is explained with reference to drawing 5 thru/or drawing 7. The electronized information used in this example is the fixed form wording of a telegram showing the problem sentence of choice form, and a reply as it is shown in drawing 5. The client 20 is shown a problem sentence from the information presentation server 10, and a reply is replied to the information presentation server 10 as a response indication from the client 20. As for a user, the characteristic data for every student and user are a completion item for every student. That is, the above-mentioned information level expresses the student's completion level in a school course. Study shall be started ignited by the information acquisition request from the user (student) side in principle.

[0024]It is a procedure figure [ in / drawing 6 can be set to the procedure figure of the information presentation server 10 in this case, and / in drawing 7 / the client 20 ]. First, information access is started from the client 20 side to the offer-of-information server 10 (Step S201: refer to drawing 7). In the offer-of-information server 10 side, as shown in drawing 6, this information access is received in the information transfer part 11, and the received information is inputted into the automatic answering part 12 (Step S101: Yes, S102).

[0025]The inputted classification check of information is performed in the automatic answering part 12 (Step S102). When the inputted information is an information acquisition request, it is judged whether (Step S103: Demand) and it are a thing from a new user. When it is an information acquisition request from a new user (Step S104: Yes), the automatic answering part 12 carries out additional storing of the completion item and request level of the user concerned user management DB13 based on the initialization information included in the information acquisition request concerned (Step S105). When it is an information acquisition request from an existing registered user after additional storing or in Step S104, (Step S104:No), An information level is read in the completion item of the user concerned under user management DB13 (Step S106), and the problem sentence corresponding to the information level is extracted out of the provided information DB14 (Step S107). And the extracted problem sentence is transmitted to the client 20 through the information transfer part 11 (Step S108).

[0026]If the client 20 receives the problem sentence from the offer-of-information server 10 with reference to drawing 7 (Step S202: Yes), this problem sentence will be shown to a user through the presentation system 21 (Step S203). When the reply corresponding to the problem sentence is inputted from a user, the response indication which includes the reply by (Step S204:Yes) and the response indication preparing part 25 is created (Step S205), and it outputs to the offer-of-information server 10 through the communication control part 23.

[0027]it returns to drawing 6, and in the automatic answering part 12, the response indication

concerned will be compared with the answer information (figures omitted -- abbreviated) in the provided information DB14 (Step S109), and the offer-of-information server 10 will estimate a response indication, if the response indication concerned is received (Step S103: response) (grading). Then, this evaluation result (marking result) is compared with the information level reference table 14B, and a new information level is acquired if needed (Step S110). It is "If whether it is considered as a new information level, for example. Like marking result > 50-point Then information level = level C", conditions are set up to the evaluation result obtained at Step S109. And when not fulfilling an information level new when fulfilling conditions, and conditions, an information level as it is is maintained. An information level always does not rise, and if an evaluation result is bad, it shall descend.

[0028]When set to a new information level, the information level in (Step S111:No) and the provided information file 13A is updated to a new information level (Step S112). Then, it returns to Step S106 and processing same about the new information level is performed. On the other hand, in Step S111, when an information level is maintained, it returns to Step S106, and the processing same about the information level concerned is repeated.

[0029]Thus, in the information presenting system 1 of this embodiment. Since the following problem sentence is automatically changed according to the evaluation result of this reply and it transmits to the client 20 again by the offer-of-information server 10 side when the client 20 replies a reply to the problem sentence shown from the offer-of-information server 10, interactive English study is attained. In the conventional study gestalt, since management and operation management of teaching materials are automatable by computer, reduction of personnel expenses or operation cost is attained. Since the learning environment which is not restrained by time is realizable for a user, prolonged study of teaching service etc. is also attained for 24 hours, for example, and it becomes possible to provide high service of convenience to a user.

[0030]In the study for which a repetition is needed like memorization of an English word, for example, For example, by shortening the time cycle which restricts the quantity of 1 time of a problem sentence small, and grasp of a problem sentence, a reply, memory, etc. take, it can respond to it and it becomes possible to realize various learning environments.

[0031](A 2nd embodiment) This invention can also be carried out as an information presenting device which used the computer of the stand-alone type. As an example of composition of the information presenting device in this case, to the inside or external storage of a computer of a stand-alone type. The same DB as above-mentioned user management DB13 and provided information DB14 is built, and while connecting to the computer paraphernalia concerned the display which has an information presentation screen, the same automatic answering part 12 as the above-mentioned information presenting system 1 is provided and constituted.

[0032]Although the point that this information presenting device is different from the above-mentioned information presentation server 10 is a point of not providing the functional block of the information transfer part 11 which performs communications control, Since substitution of the processing equivalent to the information transfer part 11 is attained by making the automatic answering part 12 constitute so that the acquisition request from a direct user, etc. may be received and may be performed, it becomes possible to acquire an effect equivalent to the above-mentioned information presenting system 1.

[0033]Although the information presenting system 1 of a 1st embodiment explained the case where English study was performed as an application, this invention is not limited to such a gestalt and can completely be similarly applied to the education system about law knowledge, special technique, etc., for example. Like a system which presents the information over an information acquisition request efficiently, for example; the customer support system of the company which answers through an E-mail to an inquiry of product information, It is applicable to the information presentation service at large to which presentation object information is dynamically changed according to the information grasp level by the side of information acquisition similarly.

[0034]Although this embodiment explained the information presenting system 1 through the public network L which is a network environment, transmission systems, such as a cable or radio, can also be substituted for this public network L.

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[Translation done.]

## DETAILED DESCRIPTION

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### [Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention belongs to technical fields, such as CAI (Computer Assisted Instruction) and a network. For example, when exchanging information between [ which was connected to the network ] two or more computers, it is related with the technique of selecting automatically the information which should be transmitted to the computer of another side by one computer side, and transmitting.

[0002]

[Description of the Prior Art] Generally in a school, a cram school, a vocational school, and other educational facilities, study is performed by the following stages thru/or procedures through information exchange between personal [ between a teacher and a student / human ].

(a) The recovery of a reply (presentation): sheet [ reply ] (c) reply, opening, and recovery management of a paper medium etc. to collections of problems, such as a paper medium, and distribution: text (b) problem (TECHNICAL PROBLEM) of teaching materials and a problem (TECHNICAL PROBLEM) : paper medium (mail or fax) etc.

(d) grading: -- when the completion level of students, such as the creation in question, a collection of problems for every distribution: level, etc. according to (f) completion levels, such as a management: student management data base of grading by a teacher and the correction (e) completion level, changes, return to a stage (a).

[0003] However, the following problems arise in the study gestalt through paper.

(1) In order to perform distribution of a collection of problems etc., recovery, correction, etc., it is necessary to secure the teacher and clerical work company according to the number of students, and personnel expenses increase in the educational-facilities side.

(2) The number of students which can respond is limited by numbers, such as a teacher.

(3) Since presentation terms, such as a reply, are determined from the Reason for the above (2), in the student side, it becomes difficult to tackle the improvement doubled with its pace.

(4) The above (1) Although there is a gestalt of a correspondence course as a way stage which solves the problem of - (3), in order to reduce communication thru/or a mailing cost, in a correspondence course, a mental and time burden is heavy to the side which may have to process at once SUBJECT, a reply, etc. which were settled in large quantities, and returns a reply. When performing SUBJECT and the reply which were settled at once, in the student side, it may stop having time to see teaching materials with the fall of greediness for learning, and teaching materials may be in what is called the "state where it was covered with dust." In order to conquer such a problem, development of the efficient education system which substituted electronized information for teaching materials etc., and substituted computer-processing for processing by a help, etc. is performed.

[0004]

[Problem(s) to be Solved by the Invention] By the way, in a general study gestalt, when only resetting the reply from teaching materials and the student from a teacher to electronized information, the wording of a telegram showing teaching materials or a reply cannot have a class from one side interactively by being provided for a target on the other hand, and becoming to another side. For example, the teaching materials from a teacher cannot be flexibly changed according to the contents of the reply from a student. That is, the completion level by the side of a student cannot be recognized by the teacher side, and the optimal teaching materials cannot be selected. In the system of the same kind which is an information presentation and acquisition side besides the above-mentioned education system, and exchanges information mutually, such a situation is produced in common.

[0005] Then, SUBJECT of this invention analyzes the implications of the response indication

corresponding to the shown electronized information by the information presentation side, It is in providing the improved information presenting system which can recognize automatically the information grasp level in an information acquisition place, and can select the optimal electronized information over the same information acquisition place. When other SUBJECT of this invention carries out the above-mentioned information presenting system, there is in providing the recording medium which enables it to realize a suitable information presenting device, an information acquisition system, the above-mentioned information presenting system, etc. by general-purpose computer.

[0006]

[Means for Solving the Problem]An information presenting system of this invention which solves an aforementioned problem possesses and constitutes an information acquisition system which a user operates, and an information presenting device connected to said information acquisition system so that two-way communication was possible. An information retaining means holding two or more electronized information which should reply an information presenting device to a predetermined information acquisition request, While reading and replying electronized information corresponding to an information acquisition request sent through said information acquisition system from said user from said information retaining means, An information presenting means which acquires a response indication sent from an information acquisition system of a reply place, Evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, It has an information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0007]Other information presenting systems of this invention are provided with the following.

An information retaining means holding two or more electronic teaching materials which are the systems which connect an information acquisition system which a student operates, and an information presenting device which a teacher operates so that two-way communication is possible, and said information presenting device should reply to a predetermined information acquisition request.

An information presenting means which acquires a response indication over said electronic teaching materials while reading and replying electronic teaching materials corresponding to an information acquisition request of a predetermined learning level sent through said information acquisition system from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of completion of the student concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, and an information switching means which changes dynamically electronic teaching materials of succession shown to said student according to said determined information level.

[0008]As for a response indication which said information acquisition system replies corresponding to electronized information which said information presenting device transmits, and the electronized information concerned, in each above-mentioned information presenting system, it is desirable that it is respectively finite wording of a telegram. If it does in this way, the above-mentioned evaluation can be performed finitely and automatic recognition of an information level will become possible.

[0009]An information presenting device of this invention which solves SUBJECT besides the above is provided with the following.

An information retaining means holding two or more electronized information used as a candidate for presentation.

An information presenting means which acquires a response indication replied from a presentation place while reading and showing electronized information corresponding to a predetermined

information acquisition request from said information retaining means.

Evaluation methods which evaluate an acquired response indication and determine an evaluation value of the presentation place concerned, and an information switching means which changes dynamically electronized information of succession shown to the same presentation place based on said determined evaluation value.

[0010]Other information presenting devices of this invention are provided with the following.

An information retaining means which is a device connected to an information acquisition system provided with a means to reply a response indication from a user to shown electronized information so that two-way communication is possible, and holds two or more electronized information which should be replied to a predetermined information acquisition request.

An information presenting means which acquires a response indication sent by user of a reply place while reading and replying electronized information corresponding to a user's information acquisition request sent through said information acquisition system from said information retaining means.

Evaluation methods which determine an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating said acquired response indication in conformity with predetermined standard information, and an information switching means which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0011]In each information presenting device, said information switching means is constituted so that said changed electronized information may be transmitted to said user for example, without waiting for a following information acquisition request. Said evaluation methods set up the expected value range of an evaluation result of a response indication for every information level beforehand, and they constitute it so that the present information level and a different information level may be determined, when said acquired response indication deviates from said expected value range. When holding a user's information level continuously, said evaluation methods are constituted so that said determined information level may be held in nonvolatile memory for said every user, enabling free updating.

[0012]An information acquisition system of this invention which solves SUBJECT besides the above is provided with the following.

A means to be a device connected to an information presenting device of above-mentioned this invention so that two-way communication is possible, and to transmit an information acquisition request including a user's authority information to said information presenting device.

A presenting means which acquires electronized information corresponding to said information acquisition request from said information presenting device, and is shown to said user.

A means to create a response indication which can recognize said information presenting device based on a reply from said user, and to reply to said information presenting device.

[0013]In order to solve SUBJECT besides the above, this invention provides the 1st recording medium for operating a computer as an information presenting device, and the 2nd recording medium for operating a computer as an information acquisition system.

[0014]To an information acquisition system provided with a means to reply a response indication from a user to shown electronized information, the 1st recording medium is connected so that two-way communication is possible, It is the recording medium which recorded a program which a computer possessing an information retaining means holding two or more electronized information which should be replied to a predetermined information acquisition request can read, and said program makes said computer perform the following processing at least.

(1-1) While reading and replying electronized information corresponding to a user's information acquisition request sent through said information acquisition system from said information retaining



means, Processing which determines an information level which expresses a grade of information grasp of the user concerned based on this evaluation result while evaluating processing which acquires a response indication sent by user of a reply place, and said (1-2) acquired response indication, (1-3) Processing which changes dynamically electronized information of succession shown to said user according to said determined information level.

[0015]The 2nd recording medium is a recording medium which recorded a program which a computer connected to an information presenting device of above-mentioned this invention so that two-way communication is possible can read, and said program makes said computer perform the following processing at least.

(2-1) Processing which transmits an information acquisition request including a user's authority information to said information presenting device, (2-2) Processing which acquires electronized information corresponding to said information acquisition request, and is shown to said user, processing which creates a response indication which can recognize said information presenting device based on a reply from said (2-3) user, and is replied to the information presenting device concerned.

[0016]

[Embodiment of the Invention]Hereafter, with reference to Drawings, an embodiment of the invention is described in detail.

(A 1st embodiment) Drawing 1 is a functional block diagram showing one embodiment of the information presenting system of this invention. This information presenting system 1 possesses two or more clients 20 used as two or more computers 10 connected via the public network L so that two-way communication was possible, for example, the information presentation server used as an example of an information presenting device, and an example of an information acquisition system, and is constituted.

[0017]The information presentation server 10 builds user management DB(database)13 and provided information DB14 to the internal storage or external storage of a server main part. It has a function of the information transfer part 11 and the automatic answering part 12 which are formed when the above-mentioned server main part reads and executes a predetermined program, and is constituted. The data input unit 22 in which each client 20, on the other hand, receives the data input from the presentation system 21 and user who present electronized information to a user, respectively, The function of the communication control part 23 and the transmit information treating part 24 which are formed when the main part of a client terminal reads and executes a predetermined program, and the response indication preparing part 25 is provided, and it is constituted.

[0018]The above-mentioned program which forms the functional blocks 11-14 in the information presentation server 10, and the functional blocks 23-25 in the client 20 at least, Usually, although it is stored in the internal storage or external storage of the computer (a server main part, the main part of a client terminal) concerned, and it is read at any time and performs, It may be stored in a recording medium with the disengageable computer concerned, for example, CD-ROM, FD, etc., it may be installed in the above-mentioned internal storage or an external storage at the time of use, and execution may be presented at any time. from the program server stored, for example in the local area network, reading appearance may be carried out at any time, and it may perform.

[0019]In the offer-of-information server 10, the user ID, user name, and information level which are a user's characteristic data are stored in user management DB13 so that it may be shown in the completion item for every [ in the client 20 ] user, for example, drawing 2. An information level expresses a user's information grasp level for every user, for example, the completion level according to the process of the below-mentioned English study.

[0020]The provided information file 14A and the information level reference table 14B are stored in provided information DB14. The provided information file 14A is the electronized information (example: English word) matched for every information level, and the information level reference table 14B list-izes standard information of the information level according to the evaluation result of

the response indication from the client 20. Drawing 3 shows the example of contents of the provided information file 14A, and drawing 4 shows an example of the contents of the information level reference table 14B. After user management DB13 and provided information DB14 comprise nonvolatile memory and a system becomes \*\*, also when it re-rises, the contents disappear.

[0021]While the information transfer part 11 receives the information access, i.e., the information acquisition request, or its response indication from the client 20 and making it answer the automatic answering part 12, The electronized information addressed to a user (this embodiment question) sent from the automatic answering part 12 is turned to the client 20, and it transmits. The electronic intelligence addressed to a user is the electronized information acquired out of the provided information DB14 based on the information level for each user of every read in user management DB13, etc. The automatic answering part 12 updates the characteristic data of the user under user management DB13 based on the response indication from the client 20.

[0022]In the client 20, the communication control part 23, The communication procedure between the information presentation servers 10 is controlled, the response indication from the information acquisition request as which the transmit information treating part 24 was inputted [ publicly known ] by the user via the input device 22, or the response indication preparing part 25 is received, and it outputs to the communication control part 23. When a user ID is contained and it performs an information acquisition request newly, initialization information, i.e., a user name, and the information level which the user set up are further included in an information acquisition request. A response indication is the reply information over the electronized information which acquired from the information presentation server 10, for example according to the above-mentioned information acquisition request, and was shown through the presentation system 21.

[0023]Next, the example in the case of performing English study using the above-mentioned information presenting system 1 is explained with reference to drawing 5 thru/or drawing 7. The electronized information used in this example is the fixed form wording of a telegram showing the problem sentence of choice form, and a reply as it is shown in drawing 5. The client 20 is shown a problem sentence from the information presentation server 10, and a reply is replied to the information presentation server 10 as a response indication from the client 20. As for a user, the characteristic data for every student and user are a completion item for every student. That is, the above-mentioned information level expresses the student's completion level in a school course. Study shall be started ignited by the information acquisition request from the user (student) side in principle.

[0024]It is a procedure figure [ in / drawing 6 can be set to the procedure figure of the information presentation server 10 in this case, and / in drawing 7 / the client 20 ]. First, information access is started from the client 20 side to the offer-of-information server 10 (Step S201: refer to drawing 7). In the offer-of-information server 10 side, as shown in drawing 6, this information access is received in the information transfer part 11, and the received information is inputted into the automatic answering part 12 (Step S101: Yes, S102).

[0025]The inputted classification check of information is performed in the automatic answering part 12 (Step S102). When the inputted information is an information acquisition request, it is judged whether (Step S103: Demand) and it are a thing from a new user. When it is an information acquisition request from a new user (Step S104: Yes), the automatic answering part 12 carries out additional storing of the completion item and request level of the user concerned user management DB13 based on the initialization information included in the information acquisition request concerned (Step S105). When it is an information acquisition request from an existing registered user after additional storing or in Step S104, (Step S104:No), An information level is read in the completion item of the user concerned under user management DB13 (Step S106), and the problem sentence corresponding to the information level is extracted out of the provided information DB14 (Step S107). And the extracted problem sentence is transmitted to the client 20 through the information transfer part 11 (Step S108).

[0026]If the client 20 receives the problem sentence from the offer-of-information server 10 with reference to drawing 7 (Step S202: Yes), this problem sentence will be shown to a user through the presentation system 21 (Step S203). When the reply corresponding to the problem sentence is inputted from a user, the response indication which includes the reply by (Step S204:Yes) and the response indication preparing part 25 is created (Step S205), and it outputs to the offer-of-information server 10 through the communication control part 23.

[0027]it returns to drawing 6, and in the automatic answering part 12, the response indication concerned will be compared with the answer information (figures omitted -- abbreviated) in the provided information DB14 (Step S109), and the offer-of-information server 10 will estimate a response indication, if the response indication concerned is received (Step S103: response) (grading). Then, this evaluation result (marking result) is compared with the information level reference table 14B, and a new information level is acquired if needed (Step S110). It is "If whether it is considered as a new information level, for example. Like marking result > 50-point Then information level = level C", conditions are set up to the evaluation result obtained at Step S109. And when not fulfilling an information level new when fulfilling conditions, and conditions, an information level as it is is maintained. An information level always does not rise, and if an evaluation result is bad, it shall descend.

[0028]When set to a new information level, the information level in (Step S111:No) and the provided information file 13A is updated to a new information level (Step S112). Then, it returns to Step S106 and processing same about the new information level is performed. On the other hand, in Step S111, when an information level is maintained, it returns to Step S106, and the processing same about the information level concerned is repeated.

[0029]Thus, in the information presenting system 1 of this embodiment. Since the following problem sentence is automatically changed according to the evaluation result of this reply and it transmits to the client 20 again by the offer-of-information server 10 side when the client 20 replies a reply to the problem sentence shown from the offer-of-information server 10, interactive English study is attained. In the conventional study gestalt, since management and operation management of teaching materials are automatable by computer, reduction of personnel expenses or operation cost is attained. Since the learning environment which is not restrained by time is realizable for a user, prolonged study of teaching service etc. is also attained for 24 hours, for example, and it becomes possible to provide high service of convenience to a user.

[0030]In the study for which a repetition is needed like memorization of an English word, for example, For example, by shortening the time cycle which restricts the quantity of 1 time of a problem sentence small, and grasp of a problem sentence, a reply, memory, etc. take, it can respond to it and it becomes possible to realize various learning environments.

[0031](A 2nd embodiment) This invention can also be carried out as an information presenting device which used the computer of the stand-alone type. As an example of composition of the information presenting device in this case, to the inside or external storage of a computer of a stand-alone type. The same DB as above-mentioned user management DB13 and provided information DB14 is built, and while connecting to the computer paraphernalia concerned the display which has an information presentation screen, the same automatic answering part 12 as the above-mentioned information presenting system 1 is provided and constituted.

[0032]Although the point that this information presenting device is different from the above-mentioned information presentation server 10 is a point of not providing the functional block of the information transfer part 11 which performs communications control, Since substitution of the processing equivalent to the information transfer part 11 is attained by making the automatic answering part 12 constitute so that the acquisition request from a direct user, etc. may be received and may be performed, it becomes possible to acquire an effect equivalent to the above-mentioned information presenting system 1.

[0033]Although the information presenting system 1 of a 1st embodiment explained the case where

English study was performed as an application, this invention is not limited to such a gestalt and can completely be similarly applied to the education system about law knowledge, special technique, etc., for example. Like a system which presents the information over an information acquisition request efficiently, for example, the customer support system of the company which answers through an E-mail to an inquiry of product information, It is applicable to the information presentation service at large to which presentation object information is dynamically changed according to the information grasp level by the side of information acquisition similarly.

[0034]Although this embodiment explained the information presenting system 1 through the public network L which is a network environment, transmission systems, such as a cable or radio, can also be substituted for this public network L.

[0035]

[Effect of the Invention]Since according to this invention the implications of the response indication corresponding to the shown electronized information are analyzed by the information presentation side and the information grasp level in an information acquisition place is automatically recognized so that clearly from the above explanation, It is effective in selection of the optimal electronized information over the same information acquisition place becoming very easy. service of information presentation can be automated by standardizing and managing the electronized information and the response indication used as the candidate for presentation, and it is effective in the practicality and reliability of a system being markedly alike, and increasing.

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[Translation done.]

## DESCRIPTION OF DRAWINGS

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### [Brief Description of the Drawings]

[Drawing 1] The functional block diagram showing the embodiment of the information presenting system of this invention.

[Drawing 2] The explanatory view showing the example of contents of the user management DB.

[Drawing 3] The explanatory view showing the example of contents of the provided information DB.

[Drawing 4] The explanatory view showing the example of contents of an information level reference table.

[Drawing 5] The explanatory view showing the example of the reply replied from the problem sentence and client which are provided from an offer-of-information server.

[Drawing 6] The procedure figure in an information presentation server.

[Drawing 7] The procedure figure in a client.

### [Description of Notations]

- 1 Information presenting system
- 10 Information presentation server
- 11 Information transfer part
- 12 Automatic answering part
- 13 User management DB
- 14 Provided information DB
- 14A Provided information file
- 14B Information level reference table
- 20 Client
- 21 Presentation system
- 22 Input device
- 23 Communication control part
- 24 Transmit information treating part
- 25 Response indication preparing part
- L Public network

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[Translation done.]